

# Northwest Pipeline – LNG/Infrastructure Update

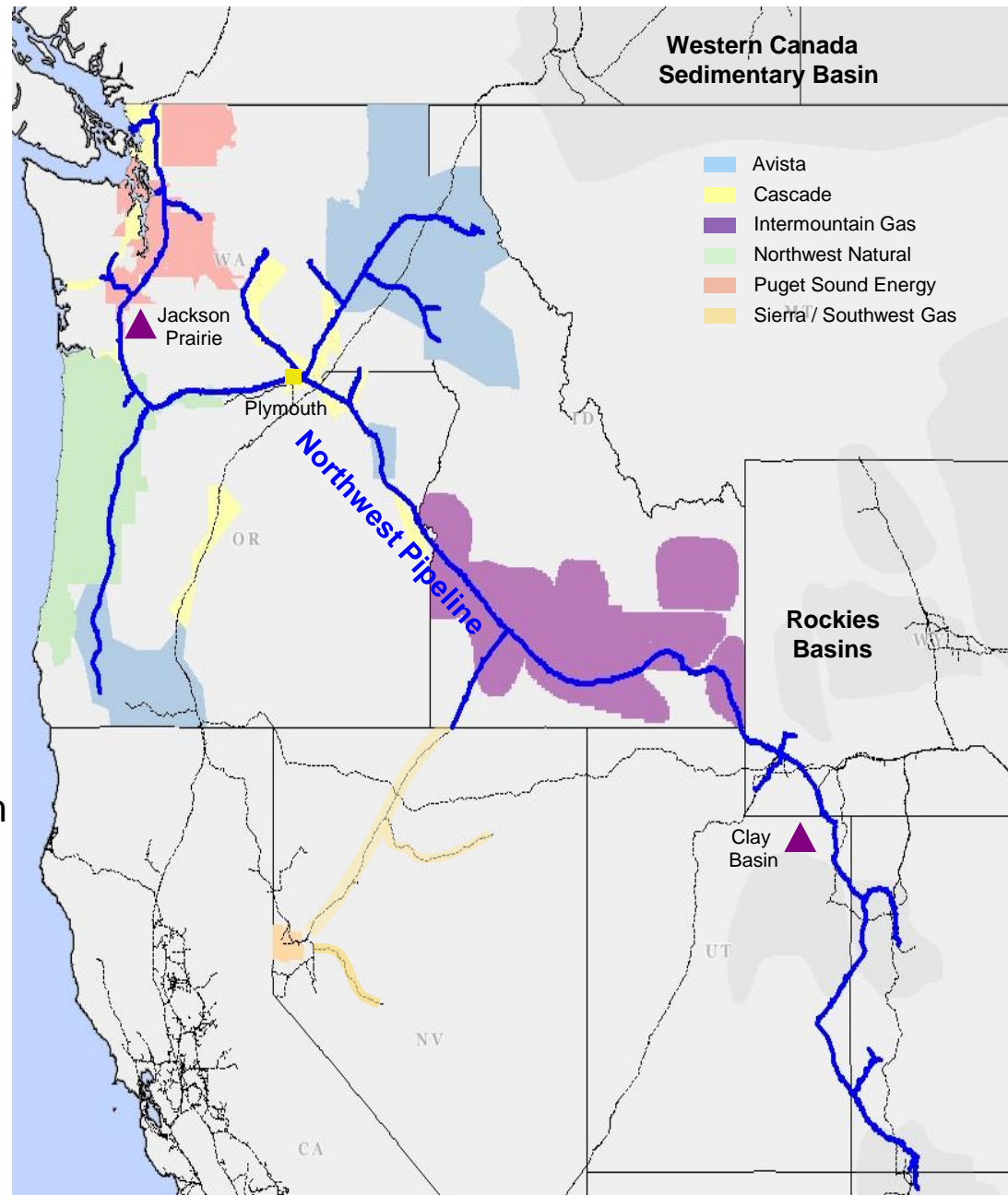
Xan Kotter, Business Development Project Manager  
March 13, 2014



## Backbone of the Pacific Northwest gas delivery system

### > Northwest Pipeline

- Interconnect with seven interstate pipelines in the Rockies
- 3.7 MMDth/d peak design capacity
- 14 MMDth of storage capacity (716 MDth/d deliverability)
- Bi-directional system with access to abundant domestic and Canadian gas supplies
- History of expanding the system to meet customers growth needs



# LNG Opportunities in the Pacific Northwest

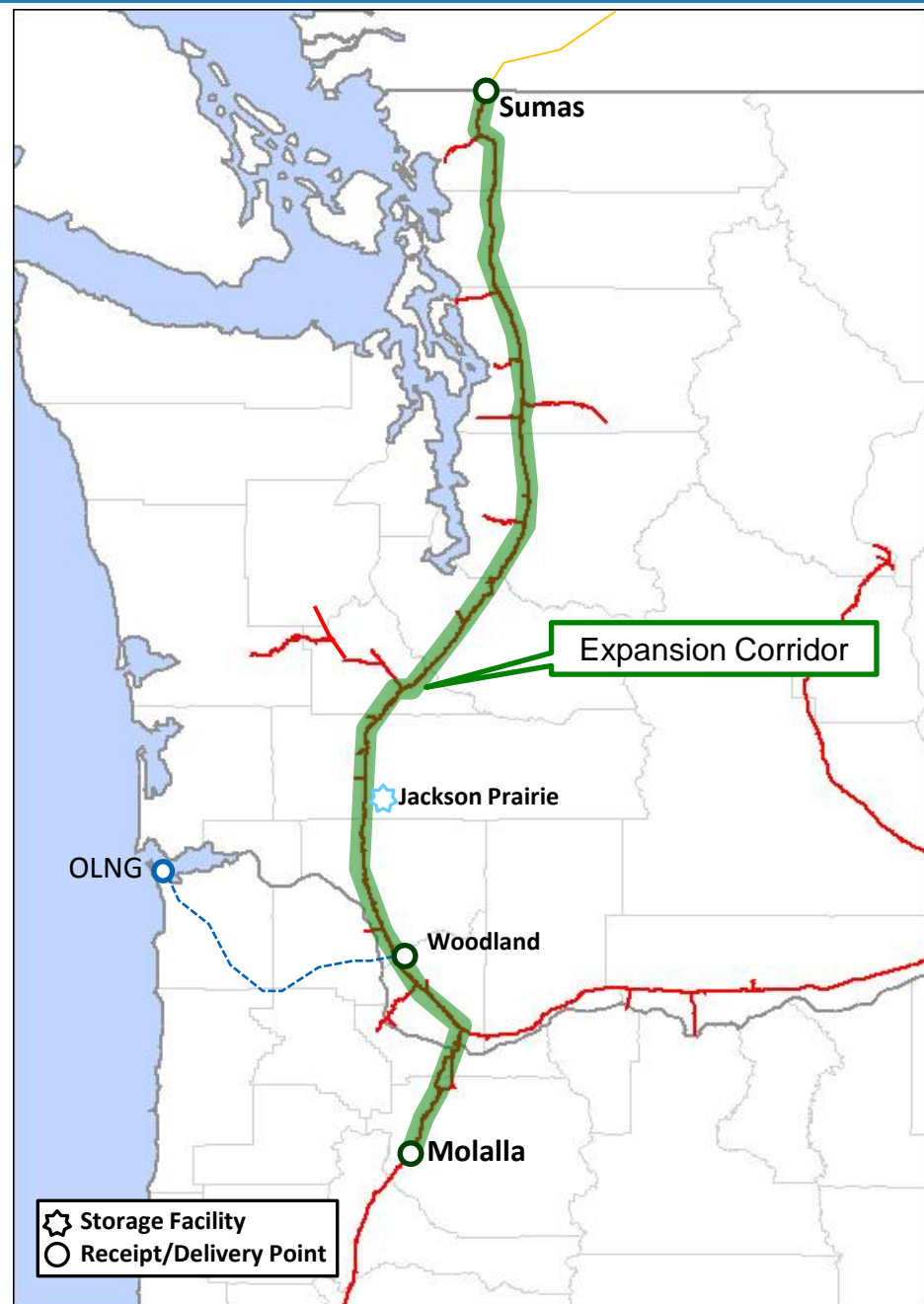


# Northwest Pipeline Business Development Update

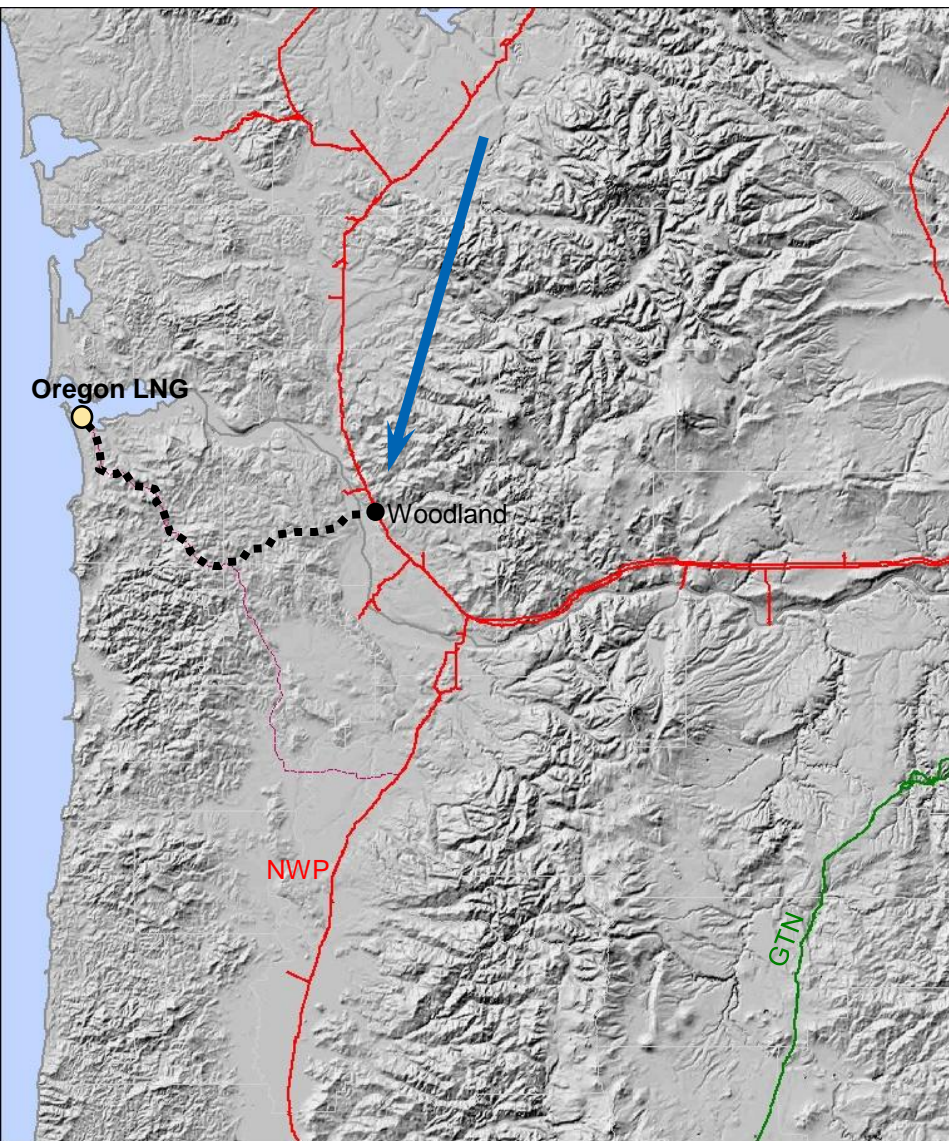
- > Major Expansion to Serve PNW Market Growth
  - Phased Washington Expansion Project (2016/2017)
  
- > Major Expansion to Serve West Coast LNG
  - Pacific Connector Gas Pipeline to serve Jordan Cove (2018);
  - Washington Expansion Project (2018);
  - Plymouth LNG truck loading service (2014)

# Washington Expansion Project (WEP)

- > Incremental expansion from Sumas to markets in the Pacific Northwest I-5 corridor as far south as Molalla, OR
  - Oregon LNG is the anchor customer requesting 750 MDth/d of incremental transportation to serve their proposed LNG export terminal
  - An earlier phase of WEP is not dependent on OLNG
    - Project can be scaled to meet smaller regional needs
- > The WEP is an expansion of the Northwest Pipeline system that will be operated in accordance with its FERC Gas Tariff



# Oregon LNG



## Project Sponsor: LNG Development Company

Suppliers: Unknown – Discussions with Canadian suppliers

Market: Unknown – Discussions with Asian buyers

## Project Description

### Liquefaction

Located on Skipanon peninsula in Warrenton, Oregon

New Berth – Columbia River

Up to 2 – 4.5 MTPA trains (~625 MDth/d each)

2 – 160,000 m<sup>3</sup> storage tanks (3.4 Bcf)

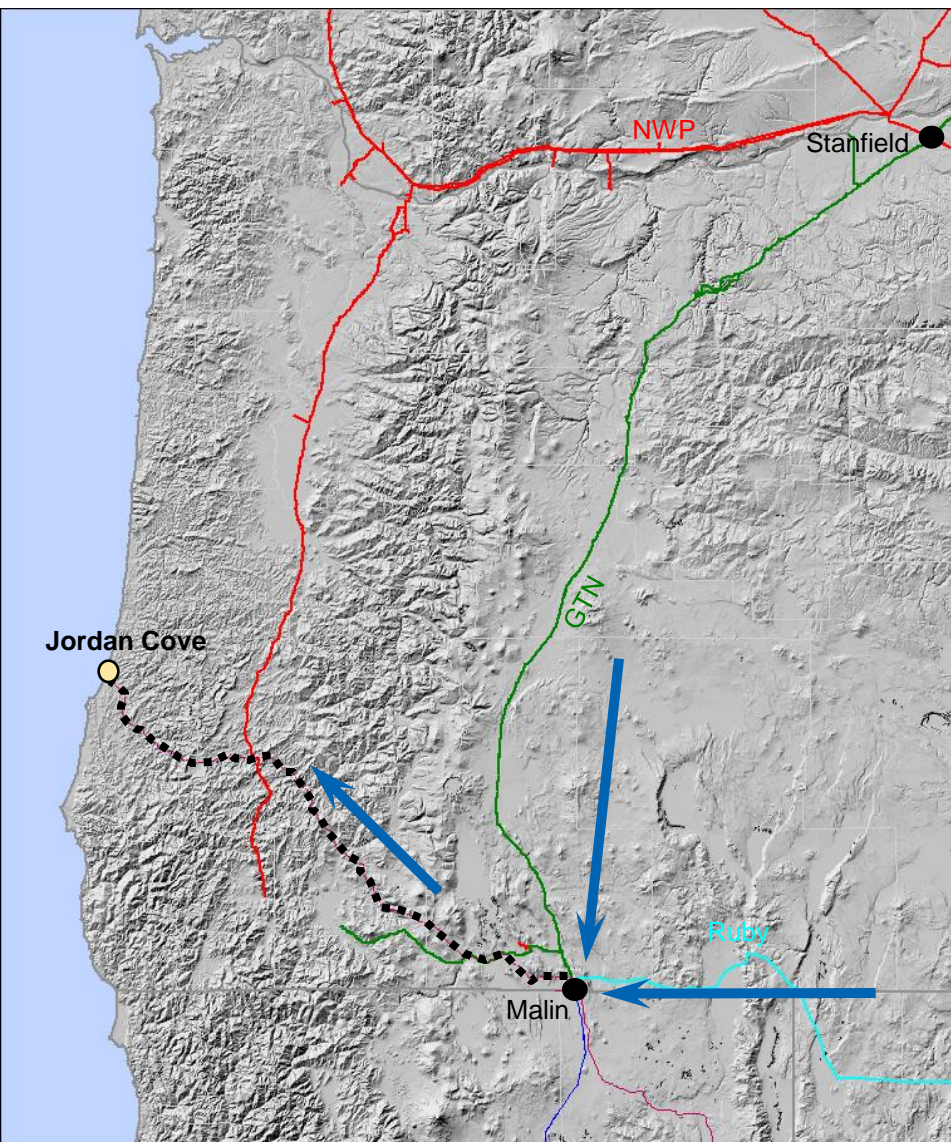
### Pipeline (Oregon Pipeline)

86-mile, 36-inch pipeline from NWP Woodland to Warrenton

## Project Status:

- > Filed FERC application June 2013 for the WEP
- > 2018 estimated in-service date

# Jordan Cove



## Project Sponsor: Veresen

Suppliers: Unknown – Discussions with Rockies/Canadian suppliers

Market: 6 parties representing various free trade and non free trade countries have officially expressed interest

## Project Description:

### Liquefaction

Located on 200-acre site on the North Spit of Coos Bay

New berth/slip

Liquefaction Capacity of 6 million Metric Tonnes per Annum

2 – 160,000 m<sup>3</sup> storage tanks (3.4 Bcf)

New gas processing and power plant facilities on site

### Pipeline (Pacific Connector Gas Pipeline)

232-mile, 36-inch pipeline from Malin to Coos Bay site

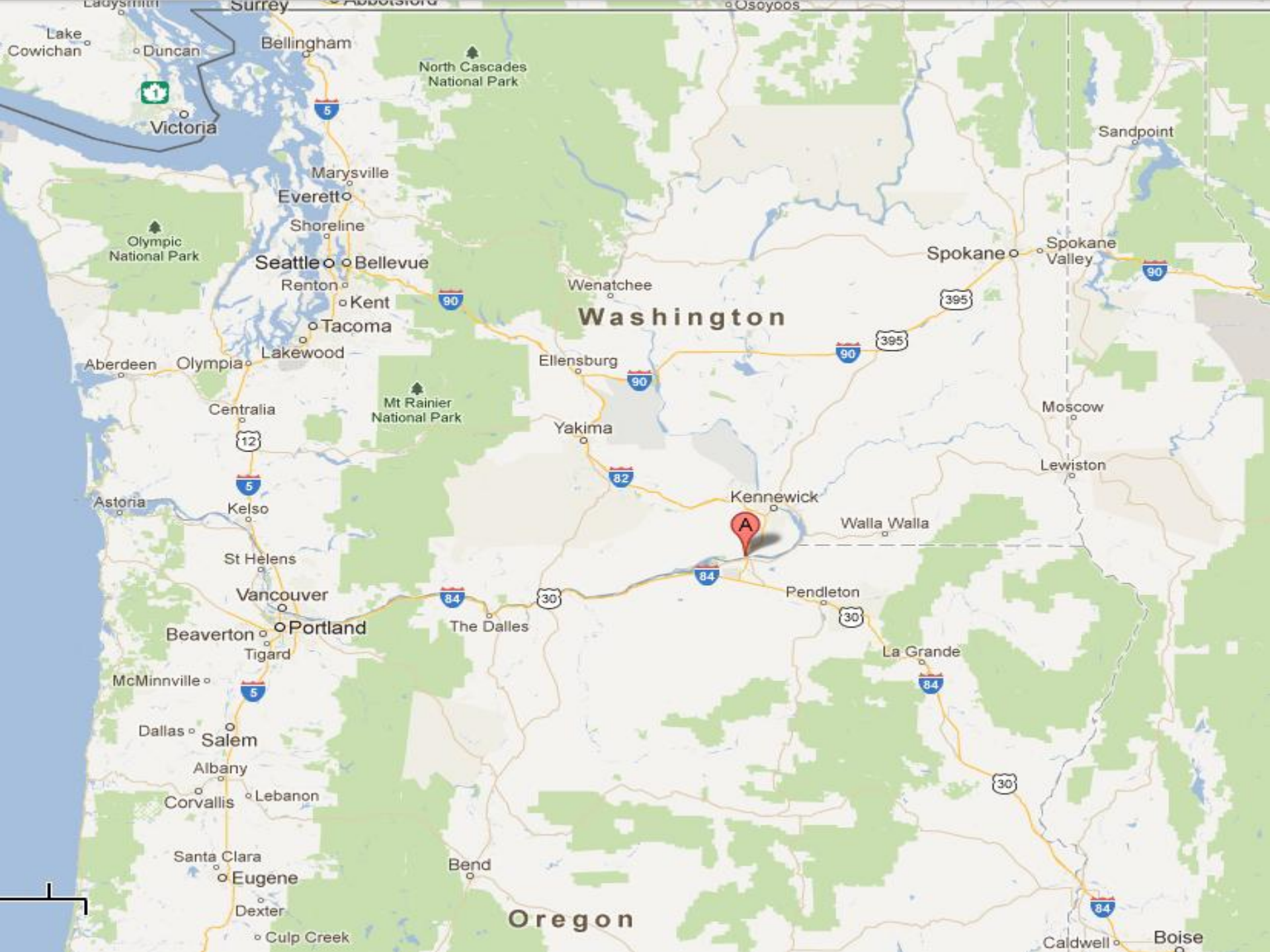
Compressor station located at Malin

## Project Status:

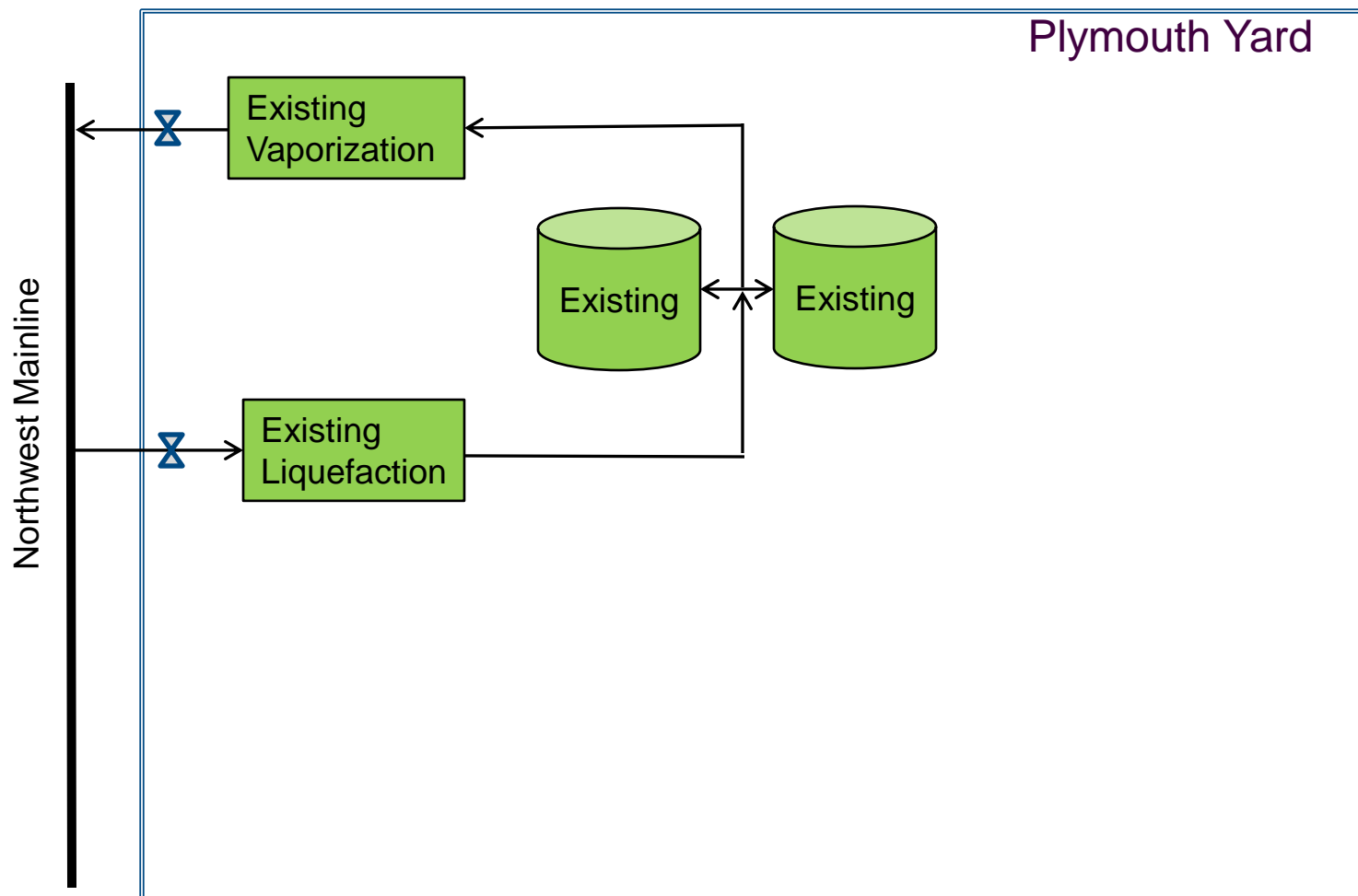
- > Export terminal and PCGP filed FERC applications in June 2013
- > Received DOE export license for FTA countries – license application for non-FTA countries currently 1st in DOE queue
- > Entered into 6 non-binding expressions of interest with customer representing in excess of 237% of capacity
- > 2018 estimated in-service

# Plymouth LNG Delivery Services





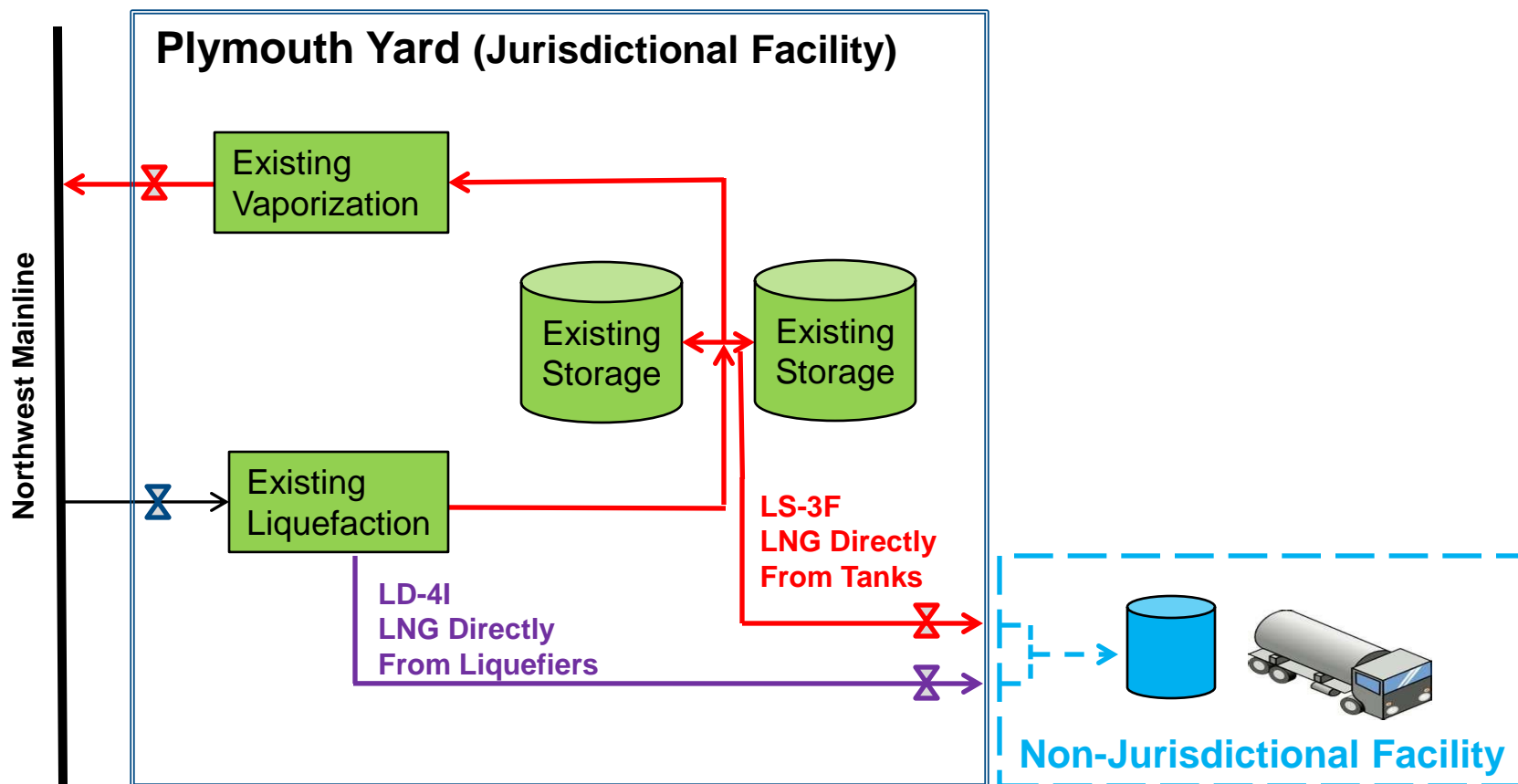
# Existing Plymouth LNG Operations



# Market Driven Opportunity

- > The option to liquefy gas year-round to serve the VNG market
  - Access to I-84, I-82, I-90, and I-5
- > Introduction of a non-jurisdictional truck loading service for a new third party that is constructing a stand-alone LNG tank and truck loading facility
- > Introduction of a non-jurisdictional truck loading service for existing Plymouth capacity holders

# New Plymouth LNG Delivery Services Overview



# Plymouth LNG Delivery Service Project Timeline

## > Key dates

- ✓ Apr 2013      Made 7(c) filing seeking FERC authorization to construct and operate the Blue Water LNG meter station and approval of the pro forma rate schedules LS-3F and LD-4I (Docket CP13-160)
- ✓ Oct 2013      Received FERC certificate order authorizing the construction and operation of the Blue Water LNG meter station and approval of the pro forma rate schedules, including initial rates
- ✓ Oct 2013      Obtained notice to proceed construction from FERC
- ✓ Nov 2013      Began Blue Water LNG meter station construction
- Apr 2014      Place in-service the Blue Water LNG meter station

# Questions or Comments

Xan Kotter, Business Development Project Manager

801-584-6496

[Xan.G.Kotter@williams.com](mailto:Xan.G.Kotter@williams.com)

